

REMARKS

Claims 1-50 are pending, in which no claims are amended, canceled, withdrawn, or newly presented.

The final Office Action mailed November 18, 2004 rejected claims 1-5, 15, 17, 21-22, 26-30, 39, 41, and 45-46 under 35 U.S.C. § 103(a) as obvious over *Amara et al.* (U.S. 6,674,743) in view of *Bhattacharya et al.* (U.S. 6,587,466), claims 6-10, 12-14, 16, 18, 23-25, 31-35, 37-38, 40, 42, and 47-50 under 35 U.S.C. § 103(a) as obvious over *Amara et al.* in view of *Bhattacharya et al.* and further in view of *Gai et al.* (U.S. 6,167,445), claims 19 and 43 under 35 U.S.C. § 103(a) as obvious over *Amara et al.* in view of *Bhattacharya et al.* and further in view of *Gibson et al.* (U.S. 6,680,943), claims 20 and 44 under 35 U.S.C. § 103(a) as obvious over *Amara et al.* in view of *Bhattacharya et al.* and further in view of *Jorgensen* (U.S. 6,452,915), and claims 11 and 36 under 35 U.S.C. § 103(a) as obvious over *Amara et al.*, *Bhattacharya et al.*, and *Gai et al.* and further in view of *Natarajan et al.* (U.S. 6,505,244).

The rejection of claims 1-50 is respectfully traversed because the references at least do not disclose “passes identified messages via a message interface to an external processor included in said network access system for implementation of the policy-based services by the external processor” as recited by independent claim 1, “passing identified messages to an external processor included in the network access system for implementation of the policy-based services by the external processor” as recited by independent claim 26, or “a message interface coupled to an external processor that is configured to implement policy-based services” and “the second packet header filter identifies messages, received from the second network interface, on which policy-based services are to be implemented, wherein the second packet

header filter passes the identified messages to the external processor via the message interface” as recited by independent claim 50.

Amara et al. is directed to applying policies in packet forwarding devices, such as routers and remote access servers. (Col. 1: 9-11) *Amara et al.* (per col. 2: 58-67) recognizes a problem with certain systems of a high overhead associated with applying policies to all incoming and outgoing packets, increasing the latency of each packet, and disadvantageously requiring time and effort to develop and manage policies for each interface. *Amara et al.* (per col. 3: 2-11) includes an internal application that generates internally-generated packets. A policy is applied to the internally-generated packets, and the packets are then forwarded to a first interface. External packets are received at a second interface, and the external packets are forwarded to the first interface without applying the policy to them.

Additionally, at col. 6: 9-25, *Amara et al.* states:

Policy engine 232 applies a policy to the internal packets, i.e., the internally-generated packets generated by internal applications 230 and the internally-destined packets used by internal applications 230. Policy engines 224-228 apply policies to the external packets forwarded by packet classifiers 214-218, respectively. Policy engines 224-228 typically also apply policies to the external packets forwarded by packet forwarder 222.

In this way, device 200 applies policies to the internal packets and to the external packets. In general, the policies applied to the internal and external packets may differ. The approach used in device 200 may not realize the efficiency advantage afforded by the approach used in device 100. However, by applying policies to internal packets using policy engine 232, regardless of which of interfaces 202-206 may transmit or receive the packet, the task of policy management is greatly simplified.

Regarding claims 1 and 26, the Office Action (pp. 2-3) correctly acknowledges that *Amara et al.* “does not explicitly indicate that said packet header filter identifies messages received at to [sic] one of the first and second network interfaces on which policy-based services are to be implemented and passes identified messages via a message interface to an external

processor included in said network access system for implementation of the policy-based services by the external, [sic] wherein said packet header filter passes all other received messages through the packet header filter to another processor” and then relies on *Bhattacharya et al.* for these features.

As best understood, the Office Action (p. 3), citing col. 5: 50-60 and col. 12: 8-14 of *Bhattacharya et al.*, equates the recited “programmable access device” with the Policy Enforcement Entity 240 of *Bhattacharya et al.* and equates the recited “external processor” with the Combined Policy Matching Engine 220, and then contends that *Bhattacharya et al.* discloses “messages received on which policy-based services are to be implemented and passes identified messages via a message interface to an external processor included in said network access system for implementation of the policy-based services by the external (Column 6, lines 44-50), [sic] wherein said packet header filter passes all other received messages through the packet header filter to another processor (Column 6, lines 50-56).”

However, at col. 12: 8-14, *Bhattacharya et al.* states:

Alternatively, the **Combined Policy-matching Engine** may be located in an external policy server and **policy decisions may be outsourced to this device**, while the **service specific modules are located at the Policy Enforcement Entity** such as the router or firewall. In such an architecture, the policy server functions as a single **policy decision** point serving a number of different network devices.

At col. 6: 13-23, *Bhattacharya et al.* states:

In this architecture, the Policy Enforcement Entity 240 obtains all actions that are applicable for a packet by querying the Combined Policy-matching Engine 220. The **decisions returned** by the Combined Policy-matching Engine 220 determine the **actual treatment that a packet receives within the Policy Enforcement Entity 240**. It may also influence the order in which the service specific modules, such as Security Enforcement Module 280 and QOS Enforcement Module 290, process the entering packets 240 before they leave the device in a possibly conditioned or transformed state 245.

Further, the decisions **270** returned by the Combined Policy-matching Engine **220** of *Bhattacharya et al.* depend on the “set of values for Selectors **260** which are defined as the attributes associated with an incoming packet that are necessary for packet classification. Policy Enforcement Entity **240** **provides these values as inputs in the query** using the Combined Policy-matching Engine Interface **250**.” (Col. 6: 24-33)

Thus, any “implementation of the policy-based services” is, at best, performed by the Policy Enforcement Entity **240**, and is **not** performed by the Combined Policy-matching Engine **220**. Furthermore, there are no received “messages” that are identified as “messages on which policy-based services are to be implemented” and which are **passed** to the Combined Policy-matching Engine **220** by any “packet header filter,” as *Bhattacharya et al.*’s Policy Enforcement Entity **240** (per FIG. 2) sends **queries with selectors** or CPE state updates **260** to the Combined Policy-matching Engine **220** to receive a decision **270** in response. Therefore, “implementation of the policy-based services by the external processor” as recited by independent claims 1 and 26 is not suggested or disclosed by *Bhattacharya et al.*, singly nor in any reasonable combination with *Amara et al.* Therefore, the rejection of claims 1 and 26 should be withdrawn.

The rejection of dependent claims 2-5, 15, 17, 21-22, 27-30, 39, 41, and 45-46 should be withdrawn for at least the same reasons as their respective independent claims, and these claims are separately patentable on their own merits.

Regarding the rejection of independent claim 50, the recited features are neither suggested nor disclosed by any reasonable combination of *Amara et al.*, *Bhattacharya et al.*, and *Gai et al.*, and the Office Action fails to explain how the recited features are suggested or disclosed by these references. For example, the Office Action (p. 9) states, “Amara also does not explicitly indicate that **the policer comprises a marker** that marks packets that do not conform with the traffic parameters. Gai teaches a method of identifying packets which do not conform

with the traffic parameters and a way to mark those packets (Column 20, lines 2-9; Column 4, line 64 - Column 5, line 8) and discarding those packets (Column 20, lines 2-9).”

Applicants respectfully submit that the Office Action does not track the recited language of claim 50, for example, with regard to the “policer” and the “marker,” for which claim 50 recites, “a policer configured to discard packets determined as nonconforming to a first traffic parameter,” “a marker configured to discard packets determined as nonconforming to a second traffic parameter,” “a message interface coupled to an external processor that is configured to implement policy-based services” and “the second packet header filter identifies messages, received from the second network interface, on which policy-based services are to be implemented, wherein the second packet header filter **passes the identified messages to the external processor via the message interface and passes all other messages received from the second network interface to the marker,**” and the Office Action does not explain how these features are met by the references. However, for reasons similar to those discussed previously, Applicants respectfully submit that these features are not suggested or disclosed by *Amara et al.* and *Bhattacharya et al.*, and the addition of *Gai et al.* does not fill in the gaps. Therefore, the rejection of claim 50 should be withdrawn.

Further, with regard to the rejections of the remaining dependent claims, Applicants respectfully submit that the deficiencies of *Amara et al.* and *Bhattacharya et al.* are not cured by the secondary references of *Gai et al.*, *Gibson et al.*, *Jorgensen* and *Natarajan et al.* *Gai et al.* is cited for a supposed teaching of a way to identify and mark packets that do not conform with traffic parameters, as teaching monitoring traffic entering a device, issuing thresholds for priority queuing and traffic classes, a plurality of output buffers, a scheduler, the use of user priority, and a reporting interface. *Gibson et al.* is cited as supposedly teaching the use of Session Initiation Protocol (SIP) messages. *Jorgensen* is cited as teaching the use of Internet Group Multicast

Protocol messages, and *Natarajan et al.* is cited as teaching the use of a fault monitor. Thus, Applicants respectfully request withdrawal of the rejection with respect to dependent claims 6-14, 16, 18-20, 23-25, 31-38, 40, 42-44, and 47-49.

Therefore, the present application overcomes the objections and rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at (703) 425-8508 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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